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ABSTRACT

This booklet presents suggestions for parents to promote their visually impaired infant's motor development. It is pointed out that babies with serious visual loss often prefer their world to be constant and familiar and may resist change (including change in position); therefore, it is important that a wide range of movement activities be introduced to visually-impaired infants to make them more comfortable with trying new positions. The first chapter presents suggestions for encouraging the infant to lie on its stomach (most visually-impaired babies are more comfortable on their backs). Information is also presented on the special psychomotor development of premature babies. Activities in the second chapter are geared toward strengthening the muscles in the front part of the body, making the baby more comfortable about moving from one position to another, and practicing motor skills already learned. The third chapter presents suggestions for encouraging the baby's ability to shift weight from side to side and to extend its arms. The booklet is illustrated with photographs of parents and children performing some of the suggested exercises. (CB)

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MOVE WITH ME

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A Parents' Guide to Movement Development for Visually Impaired Babies

EC 191 768

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INTRODUCTION

BABIES WITH a serious visual loss often prefer their world to be constant and familiar. Therefore, they tend to resist change, and this includes changes in position. Many parents have told us that their visually impaired babies only enjoy lying on their backs. From the very beginning, then, it is important to introduce a wide range of movement activities to your visually impaired baby. The earlier we start and the more appealing we make these activities, the more comfortable your baby will be when trying new positions.

Timing is important and an understanding of how your baby's muscles develop will help you know when your baby is physically ready to move in different ways. Your baby's muscles develop slowly, over the course of many months but the rate at which development occurs varies somewhat according to your baby's individual "time clock," personality and whether your baby was born prematurely.

Visually impaired babies have the same potential to learn movements as sighted babies. We all have an abundance of "guiding systems" which we use to orient ourselves in space. Vision is only one such system. Therefore, we must help visually impaired babies tune into their other "guiding systems" early on. If we don't tune into these systems, delays usually occur in certain areas such as crawling and walking. Additionally, movement skills may become less fluid than sighted babies. It's important for you to provide additional help so that your baby strengthens the necessary muscles and develops his other senses in order to acquire the necessary self confidence and a good sense of balance to encourage more fluid movement skills.

This booklet offers a variety of ways for you to promote your baby's movement development. The suggestions are meant to be guidelines and we hope that you will use them in ways that work best for you and your baby. In EVERYTHING you do with your baby, the two words to remember are "TALK" and "CUDDLE" because your voice and touch are the two most soothing ways to comfort and reassure your baby. It is important to practice these activities SLOWLY, GENTLY, and A FEW MINUTES AT A TIME. A few minutes several times a day is a good guideline.

If you are concerned about trying any of the suggested activities or if your baby is multi-handicapped, please consult your pediatrician or physical therapist. In the beginning, your baby may be unsure about the new activities. But as time passes, he will become more comfortable trying new things and your active involvement helps lay the foundation for your baby's future development. Most of all, we hope that you have fun together and that these activities become part of the ways in which you normally and naturally play with your baby and attend to your baby's needs.

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The First Few Months of Life...

IF YOUR BABY WAS BORN PREMATURELY, THERE ARE SPECIAL CONSIDERATIONS. PLEASE SEE THE SECTION ENTITLED "YOUR PREMATURE BABY" AT THE END OF THIS CHAPTER BEFORE YOU READ CHAPTER ONE.

WHEN FULL-TERM babies emerge into the world, they are tightly curled up little bundles. For the last three months in the womb, your baby was increasingly compressed and bent. When he's born, he begins to feel the effects of gravity on his body. Slowly, his muscles begin to straighten and the muscles responsible for extension (straightening) become stronger.

Newborns are also totally asymmetrical (their neck muscles are not yet strong enough for them to hold their heads in the middle of their body as they lie on their back). After the first few months, the baby outgrows certain natural infantile reflexes which occur in all newborns, and he learns to balance his muscles so that the head and trunk become symmetrical (head held in the center of his body). Symmetry is an important accomplishment for all future movements because when a baby's head is positioned in the center of the body, he will get a much better sense of balance when sitting up, standing, and walking. Symmetry is also important for developing a healthy spine.

Keeping the natural developmental sequence in mind and considering the particular vulnerabilities of the visually impaired baby, we will provide suggestions in the first chapter with three goals in mind:

We want to introduce different positions (lying on his tummy, side and back) so that your baby begins to be comfortable in all positions. WHY THIS IS IMPORTANT: Our experience has shown us that visually impaired babies often get into the habit of only enjoying lying on their backs. These babies prefer their world to be unchanging and familiar. Therefore, they resist change, and this includes changes in position. One of the ways we see this reluctance to move most clearly is that visually impaired babies seek to be "grounded"—that is, they like to put as much of their body surface against the mattress as possible. Some babies exaggerate this by actively pressing into the supporting surface. Unfortunately, babies don't learn very much, or strengthen the wrong muscles as they lie on the back. And as time passes, babies become increasingly more resistant to moving away from the mattress into space. This reluctance may delay future movement experiences.

We want to introduce activities which encourage your baby's muscles to relax and straighten so that over the next few months, he goes from a curled up little bundle to lying flat and relaxed on his tummy. WHY THIS IS IMPORTANT: All future movements require the ability to be both bent and extended. Since your baby has spent three months in a tucked up position in the womb, we now want to give him many opportunities to relax and lengthen his body.

We want to give your baby lots of opportunities to be "symmetrical" (that is, as he lies on his back, his head is positioned in the center of his body rather than turned to the side). WHY THIS IS IMPORTANT: Premature, blind babies and babies with low muscle tone often need help with symmetry. For example, premature babies often have immature "floppy" muscles because the muscles did not have enough time to mature in the womb. Also, extended hospitalizations contribute to asymmetry due to the necessary procedures which are performed on babies as they lie on their backs.

On My Tummy

IF YOUR NEWBORN baby could talk to us, he might say,

"Why should I lie on my tummy? Let's face it. It's not as comfortable or easy as lying on my back. I can't hear as well because my ear is squashed beneath my head. It's hard work to lift up my heavy head and besides, what's the reward once I do?"

In the very beginning as she lies on her tummy, use your body as her cushion. She will hear your heartbeat, feel your warmth and the two of you will be face-to-face as you softly talk to her and stroke her back and spine. This closeness will comfort her. While she lies in this position, gently bring her arms forward a bit and gently press down on her buttocks because this makes it easier for her to lift her head.

Another good way for getting your baby used to being on her tummy is to *make a habit* out of rolling her onto her stomach for a few seconds before you pick her up. When you put your baby down, first lie her on her tummy with your hand beneath her chest for support. After a moment, gently roll her over onto her back. As she gets used to being on her tummy, gradually increase the amount of time you leave her in this position.

Place your baby on your lap with her head over your knees. A soft piece of fur or sheepskin on your lap may help her feel more secure and comfortable. Stroke her neck and spine and softly blow on her back. These little tricks will encourage her to lift her head up while lying on her stomach.

It's important to provide opportunities for your baby to lie on his stomach as early as possible. This position is a necessary first step for future accomplishments such as sitting up and crawling because his neck, back and arm muscles are being strengthened.

Once your baby is comfortable lying on her tummy using your body as a cushion, place a piece of fur or soft quilt on the floor. Lie on the floor facing her. Use your finger or her pacifier and gently rub her lips and mouth with the object, slowly changing the position of where you hold the object. This will encourage her to lift her head up and move it from side to side.

As your baby lies on her tummy, place her over a bolster (long cylindrical pillow or inflated cylindrical toy) with her head and arms extended in front of her. Cradle the bolster in your arms and gently rock her backward and forward. Place a music box or sound-making toy in front of her so that she begins to reach towards the sound as she rocks forward. Once she is comfortable with this movement, change the activity a little bit and rock her from side to side.

Sit your baby in your lap with your knees up. Fold and cup her shoulders slightly and help her bring her hands together so that she can play with them or reach for a rattle that you hold. This is a wonderful position because it allows your baby to be comfortably symmetrical (the groove created by your knees cradles your baby's head in the center of her body) and naturally encourages her to bring her hands together in the middle of her body.

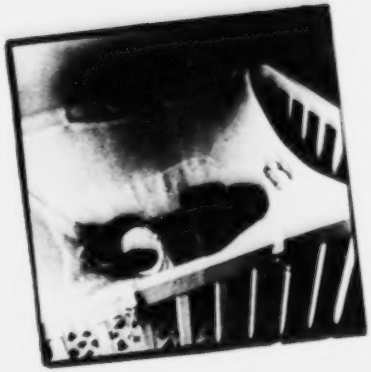
Your Premature Baby

WHEN FULL-TERM babies are born, they are tightly curled up little bundles. For the last three months in the womb, the full-term baby was increasingly compressed and bent. When he's born, he begins to feel the effects of gravity and his muscles begin to straighten.

When a baby is born prematurely, he hasn't spent enough time in this fetal, tucked position so when he emerges into the world, he is "too straight." Then as gravity starts to play its part, the premature baby often becomes "hyper-extended" (TOO straight and rigid). This kind of hyper-extension can lead to your baby's arching his back which might delay his abilities to grasp and reach for objects, to sit, to roll over, and to bring his hands together. In addition, when a premature baby is in the Intensive Care Unit, he spends alot of time on his back and this position encourages even more straightening and extension.

In the very beginning, our goal for the premature baby is to provide opportunities for him to spend lots of time in a tucked, fetal position so that he will be just as comfortable being tucked as being straight. The ability to do both is crucial for his future movement development since all movements require the body to bend and straighten. Also, once a baby becomes used to this tucked position, he tends to feel calmer and more secure.

The following activities should be done carefully, slowly, and gently. There's no rush. Take your time and introduce new positions one-at-a-time and gradually. Once your baby is comfortable being tucked, you can introduce the activities suggested in the beginning of Chapter One.



A crib cuddle is similar to a hammock and can easily be made with a large piece of material which fits over the top of a crib and is securely fastened on all four corners. The crib cuddle helps infants maintain a tucked, symmetrical position by naturally bringing your baby's hands and legs together.

Premature babies startle easily at many sounds and sudden touches and it's often difficult to calm them. This might make certain tasks such as feeding more difficult. To help your baby feel secure and calm, wrap her tightly in a blanket. This is called "swaddling" and it gives your baby alot of information about her own body from the pressure and warmth provided by the blanket.

While your baby lies on her back, gently bring her knees up to her chest. Then bring her hands to her knees. Slowly roll her to one side while maintaining this tucked position. This activity will help your baby get used to changes in position without arching her back.

After Tummy Play...Now What?

WE HAVE GIVEN your baby lots of practice lying on his tummy. If he is able to lie flat and relaxed on his tummy, lift his head up in this position, and prop himself on his elbows, then it's time to try the activities suggested in this chapter. In Chapter One, the activities strengthened the muscles in his back, neck, and arms. Developmentally, the next step is to strengthen his tummy muscles. Once his tummy muscles are strong, he will be able to balance himself in more upright positions.

With this in mind, we will provide suggestions in Chapter Two with three goals in mind:

We want to introduce activities which now strengthen the muscles in the front part of your baby's body. We suggest that you play with your baby face-to-face as much as possible so that your baby gets into the habit of leaning TOWARDS you since this provides additional opportunities for strengthening the muscles in his tummy.
WHY THIS IS IMPORTANT: Once your baby develops the muscles in the back AND front, his body will begin to coordinate both sets which leads to increased head control, sitting up, and crawling.

We want to provide new movement activities so that your baby becomes increasingly more comfortable when moving from "A" to "B."
WHY THIS IS IMPORTANT: As we mentioned in Chapter One, visually impaired babies often prefer lying on their backs and parents understandably fall into the common trap of thinking that their baby will tell them when he's ready to try new things. Many times, visually impaired babies don't tell us because they are reluctant to give up their contact with a secure, supporting surface.

We want to continually introduce activities which allow your baby to practice the skills he has already acquired as well as introduce new skills just beyond his reach.
WHY THIS IS IMPORTANT: For young babies, vision is the primary motivation which gets them moving. When a baby is visually impaired, we must provide the necessary incentives to get him interested in the world beyond himself. It is important to challenge your baby's abilities and encourage him to take the next step in his development.

Gently help your baby to tuck his bottom up so that his knees and feet are close to his hands. Help him reach for his feet. You might try putting a bell or sticker on his toes and encourage him to pull at it. Eventually, his tummy muscles will strengthen enough so that he can raise his own bottom and legs. This is especially important for visually impaired babies because it gives them a chance to feel their feet and legs which they cannot see.

Before your baby is able to sit by herself, she needs lots of practice sitting with support. Place your baby in a seated position on a soft, secure surface with a bolster or pillow as support. In the beginning, help your baby and hold her arms over the pillow as you gently rock her backward and forward.

Hold your baby just below her chest as she sits on your lap facing you. Gently rock her backward and forward. As time passes and she becomes steadier, you can begin to hold her less tightly so that she begins to find her own balance without very much support from you.

A bolster or large pillow can be used to encourage your baby to sit on her heels. This position is a good first step to learning how to crawl. Fold your baby's legs under her so that her buttocks rest on her heels as she supports her chest and arms on the bolster. Gently roll the bolster forward and backward, applying slight pressure downward on her hips as she rolls forward. This slight pressure prevents her from straightening her legs too much, which would make her fall forward.

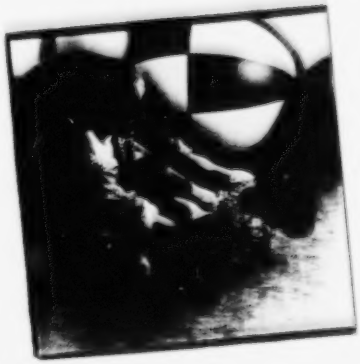
Moving Into Space!

IF YOUR BABY is now comfortable sitting up (because he has learned to use both his back and tummy muscles for balance) and is comfortable being moved around in space, then it's time to try the following games. In order to move by himself, he now needs to learn how to shift his weight to the side and use his right and left sides in different or opposing ways.

In this third chapter, we will provide suggestions with two goals in mind:

We want to introduce activities which encourage your baby's ability to shift his weight from side-to-side.
WHY THIS IS IMPORTANT: Movement through space requires the body's ability to move backwards, forwards, and side-to-side. Without the ability to shift his weight from side-to-side, your baby will have difficulty crawling, lifting his legs to take steps, making transitions such as going from sitting to all four's, or going from all four's to standing.

We want to give your baby lots of practice extending his arms in order to catch himself as he is rolled forward, backward, and to the side on a large, inflated ball. This prepares him for protecting himself while falling as he learns to walk by himself.
WHY THIS IS IMPORTANT: The more your baby is able to protect himself and prevent himself from being hurt, the more confident he will be as he becomes more upright (standing up, walking) in space.



As your child lies on her back, gently pull her up by pulling on one arm a little more than the other. Show her how to support SOME of her own weight as you pull her up. In this way, she will be helping to raise herself up to a seated position. When pulled by one arm more than the other, she will also have to find and maintain her own balance, just as she would when sitting by herself. Take turns pulling on her left arm first, then her right arm. If she arches her back when she is pulled to a seated position, place one hand gently on her stomach to keep her back straight.

As your child sits on the floor, place her favorite toys to her side and show her how to reach across her body in order to find an object. This encourages her to shift her weight from side-to-side. Guide her hand and help her find the toy. You may need to gently hold her arm down on the floor that is nearest the toy to insure that she uses the opposite hand. This movement encourages weight-shifting.

Each time your child becomes comfortable with a position or activity, try to think of ways to vary her routine just a little. For example, once she can sit steadily on the floor, place her on a very low stool or the bottom step of your stairs. Hold her gently in this position. She will have to work harder to maintain her balance this way and she will have to use her ankles to balance herself—a skill that is necessary for standing and walking.

When a child is learning how to walk, she will have more confidence if she knows how to protect herself when she falls. This activity is a wonderful way to teach your child how to put her hands and arms forward in order to catch herself. Hold your child by her legs and gently roll her back and forth on a large, inflated body ball. Encourage her to hold her arms over the ball and touch the floor as you rock her forward. You may be surprised at how quickly she learns to extend her arms to catch herself before she touches the floor. With practice, your child's other "guiding systems" will take over and give her information about where she is in space.

Once your child is comfortable lying on her tummy on the ball, vary her position. Hold her arms and let her lie on her back on the ball. Roll her back and forth and side-to-side. This is an excellent activity for developing balancing skills.

Place your child in a seated position on top of the body ball. In the beginning, hold her securely around her waist or trunk. As she becomes more comfortable and begins to find her own balance, gradually decrease your support by holding her legs. Gently move your child backward and forward while on the ball. Many children also enjoy the up and down movement while sitting on the ball.

Once your child enjoys pulling up to a standing position and can support his full weight, you can begin to introduce movement. Stand him up in a sturdy cart and let him hold onto the handle as you slowly pull the cart forward. Once he is comfortable with this game, play a "Stop and Go" game so that he improves his balancing skills and develops a sense of direction.

Your child can also begin to push the cart by himself. Place a heavy object into the cart so that it is weighted down. Place your hands over his as he holds onto the handle. The cart provides just the right amount of support for a child who is learning how to take steps.

"Cruising" means side-stepping as your child walks along a piece of furniture or along the wall. This is a common and necessary way for children to begin taking steps by themselves and it prepares children for walking without support by strengthening their hip muscles. We suggest that your child be barefoot as he practices cruising since this provides additional information about his surroundings.

As YOUR CHILD begins to cruise through your house, we suggest that you keep the furniture arrangement the same. As he cruises, he will be creating a mental map of his environment. It is important that he gain a sense of familiarity leading to increased self-confidence, curiosity and trust.

As he develops more balance and confidence, slowly decrease the amount of support you give to him as he takes steps by himself. Rather than holding his hands, hold onto the back of his overalls or the straps on his pants. In this way, his hands are free to catch himself as he falls down. As he learns the skills to protect himself, he will become more confident about his own abilities to do things independently.

You can encourage him to take his first steps by himself by placing his back against the wall or couch. Stand in front of him and use your voice or favorite sound-making toy to entice him to come to you. AND ONE SPECIAL HINT: Do NOT move backwards in order to increase the distance between you and your toddler as he steps towards you. This will confuse him and distort his sense of spatial distances.

One final note: Our experience has shown us that it sometimes takes A VERY LONG TIME for visually impaired toddlers to feel confident and safe enough to walk by themselves. Afterall, it's very scary to walk into space without being able to "size up" the situation before you plunge in. Don't be discouraged and just continue giving your toddler LOTS of practice cruising and walking with support. The time will come when he will walk by himself!

You know your baby better than anyone and it's important to trust your instincts. Be confident and be patient. If something doesn't work the first time, you can always try it another time. Your baby's initial reluctance does not mean that he won't enjoy these activities. Practice will increase your confidence and your baby's competence.

If you have questions, please feel free to contact us at the
BLIND CHILDRENS CENTER: (213) 664-2153

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The Blind Childrens Center offers a program of diversified services which meets the special needs of blind and partially sighted children (from birth through seven years), their parents and siblings. Services include: Infant Stimulation Program; Mom & Me Groups; Therapeutic Preschool Program; Residential Program; Computer-Enhanced Speech and Language Program; Multi-Handicapped Program; Psychiatric Counseling; Educational Correspondence Program; National Toll Free Phone Line; Internship Opportunities; Research and Publication Program.

The Blind Childrens Center is a non-profit organization available to visually handicapped children regardless of race, color, national or ethnic origin, sex or religion. Founded in 1938, the Blind Childrens Center is a philanthropic project of the Southern California Delta Gamma. The Blind Childrens Center receives no state or federal financial assistance.

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